

### **III. REMARKS**

The claims have been amended to conform to U.S. Practice and idiomatic English.

Claims 1-6, 9-11, 13-17 and 19-21 are not unpatentable under 35 U.S.C. 103 over the admitted prior art in view of Opas.

The claims recite a local oscillator frequency, which is equal to or about a carrier frequency plus an offset frequency with the offset frequency being equal to or about the difference between the carrier frequency and a null frequency. The null frequency is centered at a notch of a sideband. Some of the advantages are that the operating range of circuitry is not exceeded, information is not lost, and large value AC coupling capacitors with large required drive currents and large PCB board space are not needed.

As the Examiner correctly states, the admitted prior art fails to disclose the offset concept. Opas discloses that the offset amount between the carrier frequency and the LO frequency is determined by frequency errors between them (see column 4, lines 44-48) in order to reduce the noise bandwidth, thereby increasing receiver sensitivity (see column 5, lines 1-6). Opas tries to keep the null 26 away from the carrier frequency 27. There is a guard band between the carrier frequency 27 and the null 26 (see column 4, lines 17 - 37). The errors could never be so large that the offset of Opas would equal to the carrier frequency (e.g. 1.023 MHz). Even Gehring, which is referred to by Opas, has the DC null completely outside the spectrum of the modulated carrier but does not disclose any specific details related to spectral nulls. In Opas, the DC null is situated such that a portion of the spectrum falls on the DC null. There is no disclosure of setting the LO offset about equal to the offset between a carrier frequency and a null frequency as presently recited in the independent claims 1, 2, 7, 11, 12, 13, 18 and 19. Thus, even if the Admitted prior art is combined with Opas, the result is not the invention recited in the claims.

Further, since Opas is for different problems (noise bandwidth and sensitivity) than presently solved, it would not be obvious to combine it with Official Notice in the first place in order to solve the problems presently solved, see In re Biglio, 72 USPQ2d 1209, 1212.

Hence the rejection of claims 1-6, 9-11, 13-17 and 19-21 should be withdrawn.

Claims 7, 8, 12 and 18 are not unpatentable under 35 U.S.C. 103(a) over the admitted prior art and Opas, and further in view of Rapeli.

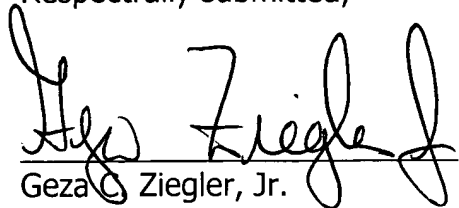
Similarly, Rapeli fails to disclose the above-discussed features. Thus, combining it with the first two references does not result in the features recited in the claims. Further, Rapeli is for the problem of an efficient and cheap multiband receivers (see col. 2, ll. 15-17). Thus, it cannot be properly combined with the first two references to solve the problem presently solved. Hence the rejection of claims 7, 8, 12 and 18 should be withdrawn.

Further, none of the references disclose a main lobe and side lobes with successive ones of the lobes being separated by spectral null points as recited in claims 11, 12 and 18. Opas shows only the null 26. For this additional reason, these claims are patentable.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

The Commissioner is hereby authorized to charge payment for any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,



Geza Ziegler, Jr.  
Reg. No. 44,004

5 July 2006  
Date

Perman & Green, LLP  
425 Post Road  
Fairfield, CT 06824  
(203) 259-1800  
Customer No.: 2512

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